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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,765	06/23/2006	Takashi Ohki	40404.42/ko	1266

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EXAMINER	
MONIKANG, GEORGE C	

ART UNIT	PAPER NUMBER
2614	

NOTIFICATION DATE	DELIVERY MODE
11/13/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/596,765	OHKI, TAKASHI	
	Examiner	Art Unit	
	GEORGE C. MONIKANG	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3 and 4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3 and 4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 10/596,765.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heo et al, US Patent 6,470,087 B1, in view of Kamata et al, US patent 3,911,222, in view of Tatsuta et al, US Patent 7,292,697 B2, and further in view of Klayman et al, US Patent 5,912,976.

Re Claim 3, Heo et al discloses an audio apparatus comprising: an audio mixing circuit that inputs a left channel audio signal (*Heo et al, figs 4 & 5; claim 2*), a right channel audio signal (*Heo et al, figs 4 & 5; claim 2*), a center channel audio signal (*Heo et al, figs 4 & 5; claim 2*), a surround left channel audio signal (*Heo et al, figs 4 & 5; claim 2*), a surround right channel audio signal (*Heo et al, figs 4 & 5; claim 2*) and a sub-woofer channel audio signal (*Heo et al, figs 4 & 5; claim 2*) and that is arranged to

deliver output by respectively mixing a center channel audio signal (*Heo et al, figs 4 & 5; claim 2: first center*), a surround left channel audio signal (*Heo et al, figs 4 & 5; claim 2: first surround*), and a sub-woofer channel audio signal with a left channel audio signal (*Heo et al, figs 4 & 5; claim 2*), a center channel audio signal (*Heo et al, figs 4 & 5; claim 2: second center*), a surround right channel audio signal (*Heo et al, figs 4 & 5; claim 2: second surround*), and a sub-woofer channel audio signal (*Heo et al, figs 4 & 5; claim 2*) with a right channel audio signal (*Heo et al, figs 4 & 5; claim 2*); but fails to disclose mixing the channels in a predetermined ratio. However, Kamata et al discloses mixing channels in a predetermined ratio (*Kamata et al, claim 5*), therefore, it would have been obvious to mix the channels of Heo et al in a predetermined ratio as taught in Kamata et al (*Kamata et al, claim 5*) for the purpose of being able to encode the signals. The combined teachings of Heo et al and Kamata et al fail to disclose a power amplifier section including a plurality of power amplifiers that amplify audio signals; and a speaker section including a plurality of speakers driven by the amplified audio signals. However, Tatsuta et al discloses a plurality amplifiers and matching speakers as taught in Tatsuta et al (*Tatsuta et al, fig. 1a*), therefore it would have been obvious to use the amplifying of Tatsuta et al for the purpose of improve the sound quality. The combined teachings of Heo et al, Kamata et al and Tatsuta et al also fail to disclose inputing the output signal of the audio mixing circuit and adjusts the signal waveforms. However, Klayman et al discloses mixing signals and then processing the mixed signals to obtain a processed output (*Klayman et al, figs 1: 20 & 24: col. 4, lines 36-48*), therefore it would have been obvious to use the mixing to processing signal method of Klayman et

al (*Klayman et al, figs 1: 20 & 24: col. 4, lines 36-48*) within the audio apparatus of Heo et al for the purpose of enhancing the sounds perceived by listeners.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heo et al, US Patent 6,470,087 B1, in view of Kamata et al, US patent 3,911,222, Tatsuta et al, US Patent 7,292,697 B2, and Klayman et al, US Patent 5,912,976, and further in view of applicant's admitted prior art (hereinafter referred to as AAPA; figs. 4-5, paras 0004-0008 of applicant's pre-grant publication number 20070147622).

5. Re Claim 4, Tanaka et al, Hibino and Tatsuta et al disclose the audio apparatus according to claim 3, wherein said audio mixing circuit is arranged to select one of a condition in which output is delivered after mixing (*Heo et al, figs 4 & 5; claim 2*), but fails to disclose a condition in which output is delivered without mixing the left channel audio signal, right channel audio signal, center channel audio signal, surround left channel audio signal, surround right channel audio signal, and sub-woofer channel audio signal as taught in AAPA (*AAPA, fig. 4, para 0005*) for the purpose of creating a more dynamic system.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GEORGE C. MONIKANG whose telephone number is (571)270-1190. The examiner can normally be reached on M-F. alt Fri. Off 7:30am-5:00pm (est).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George C Monikang/ 10/29/2008
Examiner, Art Unit 2614

/Vivian Chin/

Supervisory Patent Examiner, Art Unit 2614